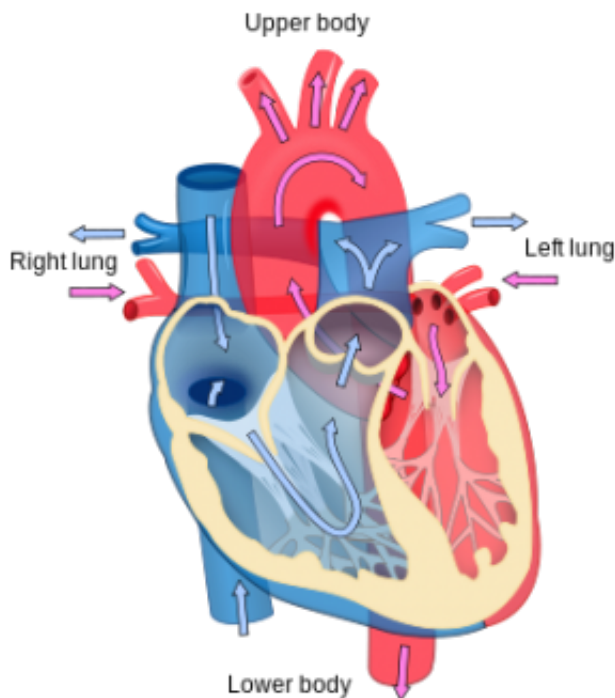


Research shows high protein foods boost cardiovascular health

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Heart diagram. Credit: Wikipedia

Eating foods rich in amino acids could be as good for your heart as stopping smoking or getting more exercise – according to new research from the University of East Anglia (UEA).

A new study published today reveals that people who eat high levels of certain [amino acids](#) found in meat and plant-based protein have lower

[blood pressure](#) and [arterial stiffness](#).

And the magnitude of the association is similar to those previously reported for lifestyle [risk factors](#) including [salt intake](#), physical activity, alcohol consumption and smoking.

Researchers investigated the effect of seven amino acids on [cardiovascular health](#) among almost 2,000 women with a healthy BMI. Data came from TwinsUK – the biggest UK adult twin registry of 12,000 twins which is used to study the genetic and environmental causes of age related disease.

They studied their diet and compared it to clinical measures of blood pressure and blood vessel thickness and stiffness.

They found strong evidence that those who consumed the highest amounts of amino acids had lower measures of blood pressure and arterial stiffness.

But they found that the food source was important – with a higher intake of amino acids from plant-based sources associated with [lower blood pressure](#), and a higher intake from animal sources associated with lower levels of arterial stiffness.

Lead researcher Dr Amy Jennings, from UEA's Norwich Medical School, said: "This research shows a protective effect of several amino acids on cardiovascular health.

"Increasing intake from protein-rich foods such as meat, fish, dairy produce, beans, lentils, broccoli and spinach could be an important and readily achievable way to reduce people's risk of cardiovascular disease.

"Results from previous studies have provided evidence that increased

dietary protein may be associated with lower blood pressure. We wanted to know whether protein from animal sources or plant-based sources was more beneficial – so we drilled down and looked at the different amino acids found in both meat and vegetables.

"We studied seven amino acids - arginine, cysteine, glutamic acid, glycine, histidine, leucine, and tyrosine. Glutamic acid, leucine, and tyrosine are found in animal sources, and a higher intake was associated with lower levels of arterial stiffness.

"All seven amino acids, and particularly those from plant-based sources, were associated with lower blood pressure.

"The really surprising thing that we found is that amino acid intake has as much of an effect on blood pressure as established [lifestyle risk factors](#) such as salt intake, physical activity and alcohol consumption. For arterial stiffness, the association was similar to the magnitude of change previously associated with not smoking.

"High blood pressure is one of the most potent risk factors for developing cardiovascular disease. A reduction in blood pressure leads to a reduction in mortality caused by stroke or coronary heart disease – so changing your diet to include more meat, fish, dairy produce and pulses could help both prevent and treat the condition.

"Beneficial daily amounts equate to a 75g portion of steak, a 100g salmon fillet or a 500ml glass of skimmed milk," she added.

Prof Tim Spector from the department of Twin Research at King's college London said: "The finding that eating certain meat and plant proteins are linked to healthier blood pressure is an exciting finding. We need to understand the mechanism to see if it is direct or via our gut microbes."

Amino Acid Intake Is Inversely Associated with Arterial Stiffness and Central Blood Pressure in Women' is published in the September edition of the *Journal of Nutrition*.

More information: "Amino Acid Intake Is Inversely Associated with Arterial Stiffness and Central Blood Pressure in Women." *J Nutr*. 2015 Jul 22. pii: jn214700. www.ncbi.nlm.nih.gov/pubmed/26203100

Provided by University of East Anglia

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